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09/778,993	02/07/2001	Mitsuo Nimura	CANO:019	2390
7590 01/26/2006			EXAMINER	
ROSSI & ASSOCIATES P.O. Box 826 Ashburn, VA 20146-0826			PHAM, THIERRY L	
			ART UNIT	PAPER NUMBER
			2624	
DATE MAILED: 01/26/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/778,993

Applicant(s)

NIMURA ET AL.

Examiner

Thierry L. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 and 32 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 and 24-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14-23, 27 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN  
PRIMARY EXAMINER

*Tran*

**Attachment(s)**

- ✓ ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

- This action is responsive to the following communication: A response to Election/Restriction requirement filed on 11/21/05.
- Claims 1-27, and 32 are pending; claims 28-31, and 33-39 have been canceled.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-27, 32, 37-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Limitations “stacking means for stacking a plurality of bundles of insert sheets each for a plurality of pages which are inserted between the sheets having images formed thereon by said image forming means, in a predetermined order of pages in which the inserts sheet are inserted” as cited in claims 1, 6, 14, 19, 27, and 32 is unclear to the examiner. First, the examiner is unclear to what constitutes a plurality of pages. Is each bundle of insert sheets having a plurality of pages? In addition, stacking means is for stacking insert sheets *that is to be inserted* between pages having images printed on and not for stacking both the insert sheets and pages having images printed on, according to the filed original specification. The examiner recommends the following language “stacking means for stacking a plurality of bundles of insert sheets, *wherein each bundle is having* a plurality of pages which are *to be* inserted between the sheets having images formed thereon by said image forming means, in a predetermined order of pages in which the inserts sheet are *to be* inserted”. Appropriate action is required for claims 1, 6, 14, 19, 27, and 32.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 14-23, 27, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al (US 5159546), and in view of York et al (US 4602776).

Regarding claim 1, Inoue discloses an image forming apparatus (*fig. 2a*) comprising:

- inputting means (*scanner, fig. 1*) for reading images recorded on originals;
- image forming means (*printer engine, fig. 1*) for forming images on blank sheets based on the read images;
- stacking means (*paper inserter trays, fig. 2 and fig. 30, col. 7, lines 5-15 and col. 23, lines 44-67*) for stacking a plurality of insert sheets which are inserted between said sheets (*interleave sheets, fig. 32d*) having images formed thereon by said image forming means;
- inserter means (*interleave inserter functions, fig. 32d, fig. 34a-b, col. 41, lines 45-65*) for feeding the stacked insert sheets so as to be inserted between said sheets having images formed thereon;
- designating means (*interleave inserter functions, fig. 32d, figs. 34a-b*) for designating at least one position (*i.e. inserts a sheet of white paper between the respective OHP copy, col. 41, lines 60-65*) in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means;
- detecting means (*paper detector means for detecting presence/absence of media in paper trays, col. 21, lines 60-67 and col. 22, lines 48-60*) for detecting an insert sheet when a plurality of positions have been designated by said designating means; and

However, Inoue teaches an image forming apparatus includes stacking means and discharging means but fails to explicitly teach a stacking means for stacking a plurality of bundles of insert sheets each for a plurality of pages in a predetermined order of pages in which the insert sheet are inserted, and discharging means operable when said detecting means detects that the insert sheet fed by said insert means is not the sheet to for the predetermined page, for discharging insert sheets onto an escape tray until the insert sheet for the predetermined page is detected.

York, in the same field of endeavor for inserting insertion paper, teaches an image forming apparatus (*image forming apparatus as shown in fig. 2*) having a stacking means (*insert paper tray 60 for stacking plurality of different types of medias 62 in predetermined order, fig. 2-3, col. 1, lines 45-65, col. 6, lines 1-67 and col. 8, lines 5-20*) for stacking a plurality of bundles of insert sheets each for a plurality of pages in a predetermined order of pages in which the insert sheet are inserted, *col. 8, lines 5-20*), and discharging means (*deflector gate 68, fig. 6*) operable when said detecting means detects that the insert sheet fed by said insert means is not the sheet to be inserted first (*insertion material sensor SE-2 for detecting types of insert media, fig. 2, col. 7, lines 25-30 and col. 9, lines 1-16*) for discharging insert sheets onto an escape tray (*SE-2 sensor senses insert sheet and if the sensed insert sheet to be inserted is not the media instructed, then forwards the sensed insert sheet to an overflow tray 72, fig. 2, col. 9, lines 1-32*) until the insert sheet for the predetermined page is detected (*insert sheet continues to be feed until the right coded media is sensed, last two steps, fig. 4b, col. 9, lines 9-32 and col. 10, lines 10-30*).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made by modifying image forming apparatus of Inoue to include an insert sheets supply tray for stacking plurality of different types of insert medias and a discharging means for discharging an insert sheet that is not the sheet to be inserted onto a different tray as taught by York because of a following reason: (●) using a single tray for plurality of different type of insert sheet instead of using plurality of different trays is an advantage of reducing hardware and its associated costs (York, col. 1, lines 40-42).

Therefore, it would have been obvious to combine Inoue with York to obtain the invention as specified in claim 1.

Regarding claim 2, Inoue further discloses an image forming apparatus according to claim 1, wherein said stacking means comprises a plurality of trays (inserter trays, col. 21, lines 60-67 and col. 40, lines 60-67+, fig. 30) for stacking said plurality of insert sheets in a divided manner, the image forming apparatus further comprising selecting means (control panel, fig. 34-35) capable of selecting between two types of stacking modes consisting of a first stacking mode in which a same type of insert sheets (i.e., manual insertion trays, fig. 32d) are stacked on each of

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said plurality of trays and a second stacking mode in which plural types of insert sheets (insertion sheets can be selected from any plurality of inserter trays, col. 40, lines 60-67 to col. 41, lines 1-67 and fig. 32k) are stacked in order in which they are inserted on each of said plurality of trays, and wherein said discharging means discharges insert sheets from while said second stacking mode is selected by said selecting means. Also see York's reference for stacking modes.

Regarding claim 3, Inoue further discloses an image forming apparatus according to claim 1, further comprising post-processing means (i.e. output bins, fig. 30 and 32d) for stacking said sheets having images formed thereon by said image forming means in a fashion mixed with insert sheets inserted by said inserter means, and for carrying out post-processing on the mixedly stacked sheets. Also see York's reference for more details regarding different output trays.

Regarding claim 4, Inoue further discloses an image forming apparatus according to claim 3, wherein said discharging means discharges said insert sheets to a location other (output bins sorter, fig. 30 and 32m) than said post-processing means. Also see York's reference for more details regarding different output trays.

Regarding claim 5, Inoue further discloses an image forming apparatus according to claim 1, comprising a conveyance path (col. 19, lines 8-20) for insert sheets, and wherein said detecting means is provided on said conveyance path for insert sheets.

Regarding claims 14-18: Claims 14-18 are the methods corresponding the apparatus and recite limitations that are similar and in the same scope of invention as to those in claims 1-5; therefore, claims 14-18 are rejected for the same rejection rationale/basis as described in claims 1-5 above.

Regarding claim 6, Inoue discloses an image forming apparatus (*fig. 2a*) comprising:

- inputting means (*scanner, fig. 1*) for reading images recorded on originals;
- image forming means (*printer engine, fig. 1*) for forming images on blank sheets based on the read images;

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- stacking means (*paper inserter trays, fig. 2 and fig. 30, col. 7, lines 5-15 and col. 23, lines 44-67*) for stacking a plurality of insert sheets which are inserted between said sheets (*interleave sheets, fig. 32d*) having images formed thereon by said image forming means;
- inserter means (*interleave inserter functions, fig. 32d, fig. 34a-b, col. 41, lines 45-65*) for feeding the stacked insert sheets so as to be inserted between said sheets having images formed thereon;
- designating means (*interleave inserter functions, fig. 32d, figs. 34a-b*) for designating at least one position (*i.e. inserts a sheet of white paper between the respective OHP copy, col. 41, lines 60-65*) in said sheets having images formed thereon for insertion of at least one of the insert sheets by said inserter means;
- detecting means (*paper detector means for detecting presence/absence of media in paper trays, col. 21, lines 60-67 and col. 22, lines 48-60*) for detecting an insert sheet when a plurality of positions have been designated by said designating means;
- interrupting means (*interrupt 315, fig. 26*) for interrupting a sheet insertion function of said insert means when at least one of the insert sheets has jammed while being inserted by said insert means; and

However, Inoue teaches an image forming apparatus includes stacking means and discharging means but fails to explicitly teach a stacking means for stacking a plurality of bundles of insert sheets for a plurality of pages in a predetermined order of pages in which the insert sheet are inserted, and discharging means operable when said detecting means detects that the insert sheet fed by said insert means is not the sheet for the predetermined page after the apparatus has recovered from the interruption by removing the at least one jammed insert sheet, for discharging insert sheets onto an escape tray until the insert sheet to be inserted first is detected, and for further discharging insert sheets up to an insert sheet immediately preceding a same type of insert sheet as the at least one jammed insert sheet.

York, in the same field of endeavor for inserting insertion paper, teaches an image forming apparatus (*image forming apparatus as shown in fig. 2*) having a stacking means (*insert paper tray 60 for stacking plurality of different types of medias 62 in predetermined order, fig. 2-3, col. 1, lines 45-65, col. 6, lines 1-67 and col. 8, lines 5-20*) for stacking insert sheets in a predetermined order in which the insert sheet are inserted (*col. 8, lines 5-20*), and

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discharging means (*deflector gate 68, fig. 6*) operable when said detecting means detects that the insert sheet fed by said insert means is not the sheet to be inserted first (*insertion material sensor SE-2 for detecting types of insert media, fig. 2, col. 7, lines 25-30 and col. 9, lines 1-16*) after the apparatus has recovered from the interruption by removing the at least one jammed insert sheet (*jammed sheet can be remove manually by operator and it is known in the art*) for discharging insert sheets onto an escape tray (*SE-2 sensor senses insert sheet and if the sensed insert sheet to be inserted is not the media instructed, then forwards the sensed insert sheet to an overflow tray 72, fig. 2, col. 9, lines 1-32*) until the insert sheet for the predetermined page is detected (*insert sheet continues to be feed until the right coded media is sensed, last two steps, fig. 4b, col. 9, lines 9-32 and col. 10, lines 10-30*), and for further discharging insert sheets up to an insert sheet immediately preceding a same type of insert sheet as at least one jammed insert sheet (*insert sheet continues to be feed until the right coded media is sensed, last two steps, fig. 4b, col. 9, lines 9-32 and col. 10, lines 10-30*).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify an image forming apparatus of Inoue to include an insert sheets supply tray for stacking plurality of different types of insert medias and a discharging means for discharging insert sheet fed is not the sheet to be inserted, then discharging the sensed insert sheets onto a different tray as taught by York because of a following reason: (●) to reduce down time due to jam sheets and required minimum attendance by an operator (York, col. 1, lines 45-49); using a single tray for plurality of different type of insert sheet is an advantage of reducing hardware costs (York, col. 1, lines 40-42).

Therefore, it would have been obvious to combine Inoue with York to obtain the invention as specified in claim 6.

Regarding claim 7, Inoue further discloses an image forming apparatus according to claim 1, wherein said stacking means comprises a plurality of trays (inserter trays, col. 21, lines 60-67 and col. 40, lines 60-67+, fig. 30) for stacking said plurality of insert sheets in a divided manner, the image forming apparatus further comprising selecting means (control panel, fig. 34-35) capable of selecting between two types of stacking modes consisting of a first stacking mode in which a same type of insert sheets (i.e., manual insertion trays, fig. 32d) are stacked on each of

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said plurality of trays and a second stacking mode in which plural types of insert sheets (insertion sheets can be selected from any plurality of inserter trays, col. 40, lines 60-67 to col. 41, lines 1-67 and fig. 32k) are stacked in order in which they are inserted on each of said plurality of trays, and wherein said discharging means discharges insert sheets while said second stacking mode is selected by said selecting means.

Regarding claim 8, Inoue further discloses an image forming apparatus according to claim 1, further comprising post-processing means (i.e. output bins, fig. 30 and 32d) for stacking said sheets having images formed thereon by said image forming means in a fashion mixed with insert sheets inserted by said inserter means, and for carrying out post-processing on the mixedly stacked sheets. Also see York's reference for more details regarding different output trays.

Regarding claim 9, Inoue further discloses an image forming apparatus according to claim 3, wherein said discharging means discharges said insert sheets to a location other (output bins sorter, fig. 30 and 32m) than said post-processing means. Also see York's reference for more details regarding different output trays.

Regarding claim 10, Inoue further discloses an image forming apparatus according to claim 1, comprising a conveyance path (col. 19, lines 8-20) for insert sheets, and wherein said detecting means is provided on said conveyance path for insert sheets.

Regarding claims 11-13, 24-26 recite limitations that are similar and in the same scope of invention as to those in claims 1-5 above and combination thereof; therefore, claims 11-13 are rejected for the same rejection rationale/basis as described in claims 1-5.

Regarding claims 19-23: Claims 19-23 are the methods corresponding the apparatus and recite limitations that are similar and in the same scope of invention as to those in claims 6-10; therefore, claims 19-23 are rejected for the same rejection rationale/basis as described in claims 6-10 above.

Regarding claims 27, 32 correspond to claims 1, 6 (respectively) except computer readable memory medium for storing program is claimed rather than printing system or data output apparatus. All computers/printers have some type of computer readable memory medium (RAM, fig. 27, Inoue) for storing computer programs; hence claims 27, 32 would be rejected using the same rationale as in claims 1, 6.

### *Response to Arguments*

- Applicant's arguments, see pages 2-3, filed 11/21/05, with respect to claims 1-27, and 32 have been fully considered and are persuasive. The restriction requirement of claims 1-27, and 32 has been withdrawn.

Applicant's arguments filed 8/4/05 have been fully considered but they are not persuasive.

- Regarding claims 1, 6, 14, 19, 27, and 32, the applicants argued the cited prior arts of record (US 5159546 to Inoue and US 4602776 to York) fail to teach and/or suggest stacking plurality of bundles of insert sheets each for a plurality of pages that are inserted between the image-formed sheets in a predetermined order of pages in which the insert sheets are inserted. In addition, the applicants argued York's insert sheets of each group are identical, therefore, it would have not any motivation for York to stack or detect identical insert sheets for predetermined pages in the bundles.

In response, York explicitly teaches a stacking means (insertion feed tray 60, fig. 3) for stacking plurality of bundles (plurality of bundles 62a, 62b, 62c...62n, fig. 3) of insert sheets each for a plurality of pages (each bundle 62a, 62b, 62c...62c containing plurality of pages, fig. 3, col. 16-36) are that are inserted between the image-formed sheets in a predetermined order of pages (insert sheets group are placed in predetermined order based upon user's attributes, col. 6, lines 15-36) in which the insert sheets are inserted. York's motivation is to present a single supply tray (supply tray 60, fig. 3, col. 1, lines 50-65) for insert sheets/materials in the form of sheet arranged to support relatively large number of different groups (62a, 62b of fig. 3, and each of these groups are arranged in predetermined order) of insert sheets and each group is separated by a coded divider sheet (divider 64, fig. 3). The purpose of implementing a coded divider sheet is to differentiate different types of insert sheets from each other, for example, to differ various colors of insert sheets, col. 6, lines 22-30).

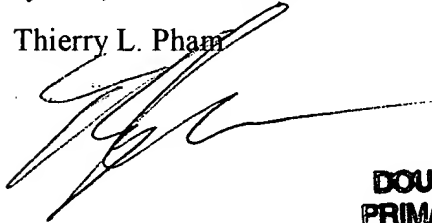
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham



**DOUGLAS Q. TRAN**  
**PRIMARY EXAMINER**

